WORLD HEALTH

THE MAGAZINE OF THE WORLD HEALTH ORGANIZATION

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Editorial

The family – at the heart of health and human development

From the dawn of human history, the family has been at the heart of human development. The family is the first emotional and social support mechanism we experience, our first teacher, our first health care provider. And it is usually the women in the family who assume responsibility for each of these essential functions. Whether the extended family of several generations living in the same household, the nuclear family of mother, father and their children or the single parent family, what unites them all is love, partnership, a set of common values and a vision of the future. Modern times have spawned radical changes which challenge the capability of families to fulfil their functions. Some changes have been positive – modern medicines combined with public health interventions such as sanitation, clean water and immunization have reduced the toll of infectious diseases and permitted many families to emerge from the shadow of death and disease. Other changes, however, such as industrialization, urbanization, environmental degradation, migration and war place great strain on the family's ability to protect its members. Poverty, which affects more than half of the world's population, is the most damaging, for it marginalizes even more those who are most vulnerable – the mother and the child.

Rapid urbanization and migration are creating vast cities where the provision of services cannot keep pace with the influx of inhabitants. Overstretched health infrastructures, inadequate sanitation and water supply, and industrial pollution all have adverse health consequences. Meanwhile, depopulation of the countryside leads to a breakdown in social structures as youngsters move to the cities in search of employment. Political and economic turmoil generates huge flows of migrants and refugees deprived of traditional sources of social and economic sustenance, with resulting heavy stress on the family.

Times of great social upheaval have always resulted in major changes in family life. Very often it is the young who represent the most radical break with traditional values and whose behaviour gives rise to greatest concern. Sexual mores change, access to harmful substances such as tobacco and psychoactive drugs increases, and the elders of the family feel that their authority and wisdom are ignored. But changing behavioural patterns can also be positive as young people develop coping strategies and seek new avenues for self-fulfilment in education and employment.

There are contradictions within all family structures. The family can be a shelter, a system of mutual solidarity and support; or it can be restrictive, hindering individual and social development, even providing the setting for child abuse, sexual abuse, battering and homicide.

Dr Tomris Türmen, Director of WHO's Division of Family Health.

The great challenge for public health is to seek ways to empower families to do well what they do best, and this requires the support of the rest of society. Families are central to human development, but they cannot do the job alone; a positive relationship between families and the health sector is essential.

The International Year of the Family in 1994 reminds us all of the crucial importance of the family in maintaining an optimal level of physical, mental and social health for its members, to the ultimate benefit of all of us. ■

Tomris Türmen

Facts for life – aimed at families

Peter Adamson

Despite the many millions of copies in circulation, this 80-page book, produced by a group of United Nations agencies, cannot reach more than a small fraction of the families for whom it is intended. Communicators of all kinds therefore have a major role to play in disseminating its messages.

Family-based ways of protecting the lives and the health of children

Since it first appeared in 1989, more than eight million copies of *Facts for life* have been published in over 100 countries and in 176 languages. There is a possibility, as yet unconfirmed, that it could be the most translated book in the world after the Bible. The essential idea of *Facts for life* is simple. It brings together, in non-technical language, today's scientific consensus on practical, low-cost, family-based ways of protecting the lives and the normal, healthy growth of children.

The result of collaboration between UNICEF, WHO, UNESCO and UNFPA – in cooperation with over 160 nongovernmental organizations, the book presents basic family health messages under chapter headings: timing births, safe motherhood, breast-feeding, child growth, immunization, diarrhoea, coughs and colds, hygiene, malaria, and AIDS.

A revised edition launched in late 1993, contains an additional chapter conveying basic messages about early childhood development. All chapters have been revised, taking into account the many comments received from users over the last four years, and the text has again been reviewed by WHO programme managers, by advisers from UNICEF and UNFPA, and by 42 child health specialists from hospitals and medical schools in all parts of the world.

Communicators

Despite the many millions of copies in circulation, the book cannot reach more than a small fraction of the families for whom it is intended. Communicators of all kinds therefore constitute its real audience – including health workers, teachers, religious leaders, the mass media, voluntary agencies, the business community, and government agencies. The response from all of these potential communicators of *Facts for life* has given its messages an unprecedented outreach over the last four years.

By 1993, it was in use by health services in most nations. In Viet Nam, 25 000 *Facts for life* communicators have been trained by the Ministry of Health. In Sierra Leone, the health service is training 1400 teachers, health workers and agricultural extension workers to use it; nurses and medical students in Ecuador use it for compulsory community service. In Turkey, one million leaflets and tens of thousands of *Facts for life* posters are helping midwives, nurses and doctors to reach families, and over a million *Facts for life* leaflets have been used by 65 000 imams in their Friday sermons.

In more than 30 nations, the book has become part of the formal school curriculum and of adult literacy programmes. In Mexico, almost a million copies have been printed for use as school textbooks, while China too has published one million copies

in 12 languages. In Iran, it has been adapted for the national literacy campaign, reaching two million people – mainly women, and in Turkey *Facts for life* is reaching all schoolchildren via the training of 250 000 teachers and 1500 school inspectors.

In Myanmar, 200 000 copies of the national version have been produced for schools, health centres, water and sanitation workers, and religious organizations. In Nigeria, 300 000 copies have been produced in four major languages for schools, nursing colleges and religious leaders.

In almost every country, the mass media have responded with regular TV and radiospots, serialization of the book, quizzes and competitions, and the inclusion of its messages in hundreds of television and popular radio programmes.

Top-level assistance

Many political leaders have also helped. Former President Corazon Aquino of the Philippines ordered the book to be translated into the country's 10 major dialects. President Joaquim Chissano of Mozambique launched a national version and called on all the nation's communicators to promote its messages. In Viet Nam, the Vice-President of the Council of Ministers announced: "The Government of Viet Nam, the people of Viet Nam, undertake the challenge

Knowledge about good nutrition has to be translated into action at the local level

of communicating *Facts for life* for the happiness of all mothers and children". The Thai version was launched by the Deputy Prime Minister with the message that "*Facts for life* is a practical gift of lasting wisdom to all parents".

Some of the methods of communication have been less orthodox. In Brazil, a major supermarket chain has inscribed the messages on 120 million plastic bags. In Kenya, 20 million matchboxes carry the messages, and in Turkey they have appeared on two million milk cartons. Sri Lanka's Broadcasting Corporation has organized a national *Facts for life* quiz for 10 000 schools.

Many governments and nongovernmental organizations have also adapted it, tailoring its messages to fit specific national or local needs. Chapters have been added or substituted, usually with the help of leading national experts, on such subjects as smoking, drug abuse, schistosomiasis, handpump maintenance, dental hygiene, accidents, disabilities, iodine deficiency disorders, and sexually transmitted diseases.

Using facts for life

Now a companion booklet, entitled *Using facts for life – a handbook*, has been produced to accompany the revised edition. Drawing on the worldwide experience of recent years, *Using facts for life* discusses the strategies and actions which practitioners judge to have made an impact. This booklet attempts to answer such questions as "How can the knowledge contained in *Facts for life* be transformed effectively at local level?".

Both publications acknowledge that information is only one factor among the many determinants of health and health behaviour. Poverty, social pressures and norms, levels of education and individual confidence – all these affect the possibilities and the practice of health care. But it is equally the case that no amount of socioeconomic analysis of the causes of ill-health can replace the right of all families to possess up-to-date practical, scientific information which could help them to protect the lives and the health of their children by methods they can act on *now* and at a cost they can afford *today*.

The second edition of *Facts for life* is available from UNICEF, UNICEF House, DH40, *Facts for life* Unit, 3 UN Plaza, NY 10017, USA, or through a local UNICEF office. The companion booklet – *Using facts for life* – will also be available from late 1993. ■

Monitor the growth of your child: health workers communicate essential messages to a mother

Mr Peter Adamson is a freelance journalist specializing in global development issues. His address is 18 Observatory Close, Benson, Wallingford, Oxfordshire OX10 6NU, England.

Health and the family

Vittorio Cigoli & Wilma Binda

Some families manage to cope with illness on their own; others may have few or no resources. In those cases, only external help – from properly alert health personnel – can find the appropriate resources and solutions.

Greater involvement of families in health care would benefit everyone

For all of us, the most significant relationships and fundamental experiences of life occur within the family. The family setting is therefore the natural framework for matters concerning health; yet only in the last few years has the importance of the family to individual and collective health been gaining recognition. If the family's role is important in keeping its members healthy and protecting them from disease, that role becomes essential when it comes to treating, rehabilitating and assisting them during illness; indeed, the success of every cure or course of treatment, of every therapeutic or health-giving prescription, depends on the family.

This consideration should lead to a greater involvement of the family in health care, in accordance with the model of community medicine outlined by WHO at the 1978 Alma-Ata Conference, in which the family was seen as an element of primary health care with an active, responsible and participatory role. Unfortunately the family is still seen by health systems as something on which to unload all of the patient's problems, especially in the case of people with chronic or terminal illness.

For a correct analysis of the link between family dynamics and the issue of health and illness, we suggest that two essential points should be borne in mind.

1. Understanding health and illness in the family

Common perceptions of health and illness among individuals or families reveal close links with the quality of the relationship between family members. Psychosocial studies relate the health of the individual closely to the type of family in which he or she lives, to its dynamics, functioning and quality of life. The kind of relationship an individual has with people closest to him or her (family, relatives, friends) is very important for his or her own well-being. Health is seen as a condition of this well-being, certainly in physical terms, but even more in relational terms, since a harmonious family life, or, on the contrary, the existence of acute conflicts and tension, will affect the well-being or illness of the family members.

It is therefore vital for health personnel to focus attention on the different ways in which families, considered as groups with their own history and culture, try to help their own members in coping with various aspects of life, especially health. Here health is understood as physical and interpersonal well-being, with its close connection to stressful events, including illness, and all the foreseeable and unforeseeable situations including sufferings, demands for care and attention,

disruption of a hard-won equilibrium, and even doubts and self-questioning. Also when families are changing and medical sciences are developing rapidly, all these changes and developments must take into consideration and eventually co-exist with the social ramifications of health – and the possible threats to it – which different generations in the family all share.

2. Relations between families and the health care system

In most Western countries the health system does not seem to give enough consideration to what the care of a sick person really entails, so that the "illusion of a doctor–patient reality in medical practice" prevails. This illusion obscures the multifaceted aspect of people's relationships, which involves on the one hand the entire family structure of the patient, and on the other the health care system, of which the doctor is an integral part.

Take, for example, those who are physically and mentally handicapped, mostly entrusted to parents and relatives, or elderly people who cannot cope alone and are looked after mainly by daughters and daughters-in-law. In other situations the family connection is completely ignored and all the problems of family life are forgotten, leaving health – and illness – within the narrow framework of the doctor–patient relationship. Collaboration in protecting or restoring health between the patient, the family and the health care system has been described as a "therapeutic triangle" – an expression which clearly reflects the reciprocal influence of all three parties. Within it, there can be collaboration which promotes health, when the family members support the prescribed treatment or, on the contrary, a negative closing of ranks that can hinder the solution of the problem.

If a paediatrician has a good rapport with a child patient but not with the mother, it is obvious that treatment might not be completed or not even started at all. The same can also happen, in our experience, when a physician treating a man with diabetes does not encourage the wife to prepare proper diets to control his blood sugar level. The "therapeutic triangle" thus shows how essential it is for health personnel to have specific training to improve their analytical capacity, their understanding, and their ability to deal with the needs and realities of all those involved in the relationship.

Guiding principles

These two factors can be seen as the guiding principles that control often tumultuous family relationships, particularly during such stressful events as serious chronic or terminal illness, so disruptive of family life. On such occasions, families have a particularly hard time and need all the resources available. Each family deals with these problems in its own way and in its own time. Some families manage completely on their own, while others have few or no obvious resources. Sometimes the cohesion of the family is lost and each member is left alone to fight his or her own battle. In those cases, only external help – from properly alert health personnel – can find the appropriate resources and solutions that can bring meaning and value to such experiences. In this way both the individual and the entire family, even amidst suffering and hardship, can rediscover health as interpersonal well-being. ■

Professor Vittorio Cigoli is Professor of Social Psychology at the Faculty of Education, Catholic University of Brescia, Italy, and a Member of the Board of Directors of the Catholic University of Milan. Dr Wilma Binda is Researcher at the Faculty of Education, Catholic University of Milan, Largo A. Gemelli 1, 20123 Milan, Italy.

Harmony within the family – an important element in well-being.

AIDS in Africa: a family disease

Samuel Kalibala & Sandra Anderson

Underprivileged families run a greater risk of becoming HIV-infected

The traditional extended family is withering away in Africa just when its caring influence is most needed to confront the calamity of the AIDS epidemic. Communities now need all the outside help they can get to reinforce the role of families to plan for and provide care for their HIV- or AIDS-affected members.

AIDS is a calamity for humanity whose spread is perpetuated by the other calamities, especially poverty and underdevelopment. The social and medical impact of this disease is worst among underprivileged individuals, families and communities all over the world. To date, sub-Saharan Africa is one of the world's regions most affected by AIDS; up to mid-1993, WHO estimates that more than eight million adult infections have occurred there. In 1990, UNICEF forecast that between 3.1 and 5.5 million children would shortly be orphaned in ten East and Central African countries alone.

The AIDS epidemic in Africa has highlighted the strength and security of the extended family system in dealing with problems. In some cases family members have responded by sharing food, shelter and clothing with individuals affected by HIV/AIDS and with their survivors, while medical care, emotional support and school fees have been offered selflessly. In other instances, however, family support has fallen short of the needs of people with AIDS and their survivors, so that many external supporters and donors have come in and offered generously to supplement the family efforts. In the long term, it is feared that AIDS and other factors are weakening the family's ability to provide care and support to the affected.

In the changing socioeconomic environment, monetary considerations are taking over from humanitarian and social concerns. Villages are becoming semi-urban settings with the unfortunate consequence of individual competitiveness associated with semi-urban lifestyles. Survival concepts like "neighbourliness" and "friendship" are disappearing. As individuals spend their time and thought in the quest for more power and money in order to spend it on sex, drugs and alcohol, there is less and less consideration for helping a neighbour in distress. African families will inevitably become more and more selfish. Economic development is essential in order to reduce poverty, but it has in effect weakened one of the strengths of the African community – generosity among neighbours.

Strong unity under a dominant head of the household has been promoted by polygamy, many children, many relatives, respect for elders, clans, arranged marriages and so forth. This kind of *social control* has been perceived as *social security*, contributing to a stable army of a family that can be counted on to combat a problem like AIDS.

A classic vicious cycle

Today, however, it is no longer easy or desirable to have polygamous marriages with many children. Even where such large families still exist, the social "security" or social "control" is reduced by the declining monetary strength of the head of the household. Individuals within a family are having to fend for themselves, so they are less available for family chores and, potentially, for AIDS care.

In a classic vicious cycle, when heads of households become ill with

AIDS at the prime of their strength, they cannot develop wealth and build a strong family unit. They have less land, fewer cattle and less money – all to the detriment of the family's capacity to cope with a chronic disease financially and socially. Also, the traditional work of women, caring for the children and the sick, is neglected because of other employment, even taking their farm produce to market themselves. This increased economic independence is a boon to AIDS prevention, yet makes women less available for home care chores. Women are being overwhelmed with having to provide care for chronically ill husbands and brothers. When women fall ill, now at a ratio of 6 women to 5 men in Africa, they are usually cared for by their mothers, sisters or children.

In addition, more children are going to school and hence are not available to till the land, or to fetch water and firewood, or to help the family to provide effective care for the sick. To receive a newly orphaned child in one's home is now seen more as an extra mouth to feed and more school fees to pay than as an extra labour asset.

Like the women, adolescents are sensing a new freedom. In the fight against AIDS, it is desirable for them to become responsible for their sexuality and be able to negotiate postponing sex until older or married, or practising safe sex. Yet acquiring the right not to be exploited for labour and the right to learn about sexuality, of necessity makes African youngsters free to opt out of their traditional household chores; this again will decrease their contribution to the care of the sick.

An African dilemma

Modern and traditional religions all support the idea of "the good samaritan", showing kindness to humanity in anticipation of spiritual rewards. Such values are ideal to maintain family and community care for the sick among a "humble peasantry" as compared to an aggressive market economy. But the fight against poverty and against such calamities as AIDS requires that African countries open up to the world and strengthen their economies. This is the dilemma of Africa in the AIDS era. Time is precious, and voluntary activities of care cannot be provided for long periods. Calamities, including AIDS itself, have taught individuals to strive and save for the bad times ahead. Even the most sacred and traditional rites of paying respect to the dead are affected, as more people are dying within a short period, and villagers can no longer give with a generous hand to help others.

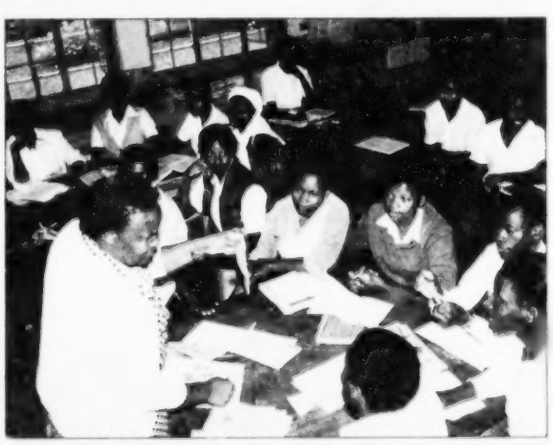
The direct cost of AIDS treatment in Africa is enormous, even though it is not comparable to that in the western world: US$ 32 000 in the United States, as against $393 in sub-Saharan Africa per patient for one year. According to the World Bank, public expenditures on health in sub-Saharan Africa currently range from $1 to $30 per capita. However, most countries spend $5 or less per person. Communities are creating and supporting self-help and locally accessible health and social services. Nevertheless, public health authorities must work hand in hand with affected communities and infected individuals to solve the immense problems caused by AIDS and poverty. Instead of providing care and support *to* affected individuals, families and communities, the public health and community development agencies should provide AIDS care and support *with* them.

Communities must increase their own awareness of the consequences of AIDS as a family problem. Families will have to create or rejuvenate the traditional support networks among themselves while still maintaining progress gained in the advancement of women and children, and these networks will assist families to acquire skills and share experiences in care and support activities.

Where does hope lie?

Several plausible arguments suggest that Western aid will decrease in the future, as it is already doing today, due to donor fatigue and other reasons, including the economic recession in the West and the ending of the Cold

The family unit loses its strength when one of its members dies in the prime of life



Young people receive a lesson on safe sex

War. Consequently, more responsibility will devolve on families to devote more time to long-term planning of how to cope with AIDS care and prevention. Such activities should be planned and developed *by* or *with* the families themselves. The emphasis of external partners should shift from providing care and support to the family, to assisting the family to plan for and provide both care and prevention for its affected individuals. AIDS care and prevention must be seen as the responsibility of both men and women.

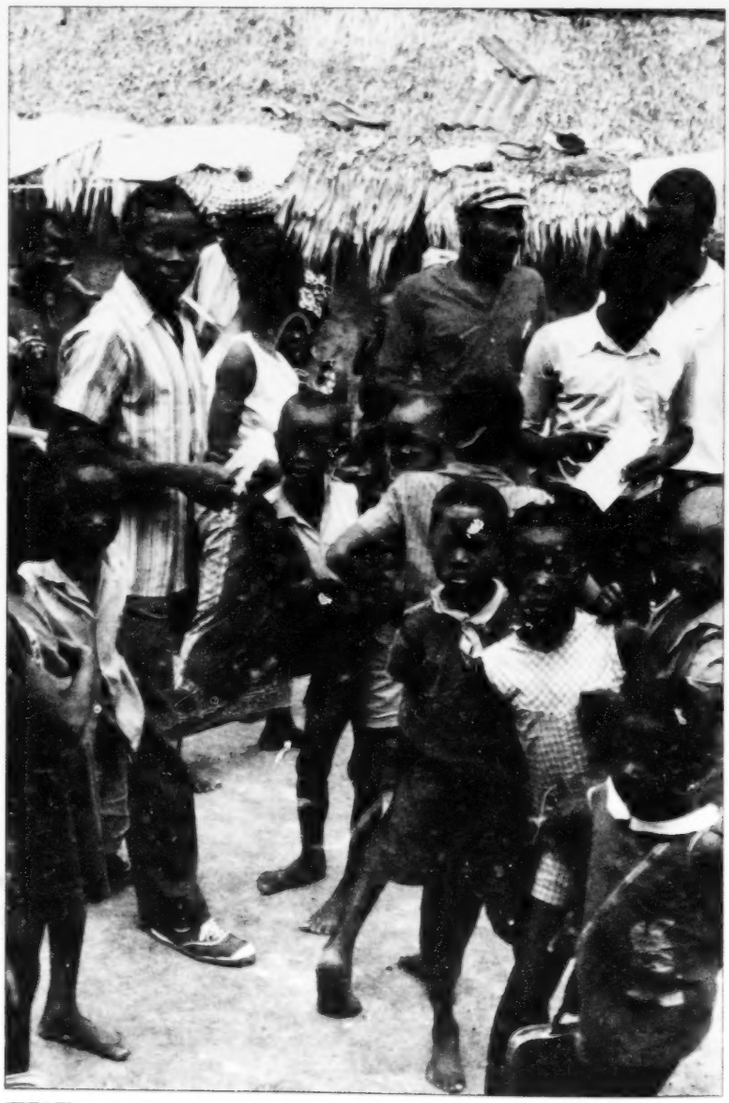
Nongovernmental organizations have led the world in responding to HIV/AIDS as a real and enormous problem of humanity, and are invaluable partners in shifting the emphasis from short term to long-term care and prevention.

Religious groups too, which have long provided a tremendous amount of medical and social assistance, will have to focus on helping groups of families in a village – for instance, by offering training in appropriate AIDS care to all rather than concentrating only on the currently affected families.

Funding agencies have highlighted AIDS as a priority issue. The World Bank's estimates of the social and economic consequences of the epidemic leave no room for doubt that the most affected communities are those least prepared for the consequences. Much more effort must be devoted to preparing these communities to handle AIDS as their own continuing chronic problem. The policies of governments and funding agencies alike should widen their agenda to assist whole communities in preparing for care and support of people with HIV/AIDS and of their survivors. ■

Dr Samuel Kalibala, Scientist, Counselling, and Dr Sandra Anderson, Scientist, Public Health Nurse, are with the Global Programme on AIDS, World Health Organization, 1211 Geneva 27, Switzerland.

Today's young people are learning to be responsible about their sexuality.



African families need the protection of their traditional support networks in the face of the AIDS pandemic.

The plight of refugees

Marie Lobo

The International Year of the Family, 1994, offers the United Nations High Commissioner for Refugees (UNHCR) an opportunity to revitalize its concern for the human dimension of refugee life, over and above the physical aspect of merely providing food, water and shelter.

The concept of "family" differs with country, culture and tradition. In situations where there are mass movements of refugees, this concept is further blurred. Individuals establish relationships for a variety of reasons, often mainly to obtain support in a period of transition, while the violence and trauma associated with the transition from citizen to refugee affect people's lives often far into the future. Refugees who are awaiting durable solutions to their situation have to be assisted to find ways and means of sustaining themselves in a reasonable state of well-being.

The concept of health adopted by WHO in 1948 – as a total state of well-being physically, mentally and socially and not merely the absence of disease – therefore takes on particular significance for refugees who have been uprooted from their homes and homeland and must adapt to life under new circumstances and often after great privations and hardship. The physical losses of material possessions may be compounded by losses of life and limb. However, the emotional and mental effects are even worse because they are not perceived; they therefore last much longer and are more difficult to heal.

People working with refugees have to keep in view the dual concept of mind and body and the context in which they live; and programmes for refugees have to be organized in a manner which encourages a fuller expression of every aspect of life.

The International Year of the Family (IYF) proclaimed by the United Nations for 1994 has given an impetus to this broader concept of health, and has permitted the offices

Growth monitoring: refugees everywhere need outside assistance to maintain a reasonable state of health

of the UNHCR to organize activities for refugees which will include men, women and children in a process of rediscovering their potential. So far, 69 countries where the UNHCR has offices have organized IYF-related activities. The IYF and what it represents has particular relevance for refugees.

Disrupted families

When planning for the International Year, UNHCR has attempted to understand the various factors that characterize refugee family life. Among these are:

- Separation from family members.
- Loss of near ones.
- Change of circumstances – financial, social, physical, educational.
- Loss or change of previous roles: breadwinner, homemaker.
- Loss of community support.
- Change of previous norms, e.g., customs, traditions, religious guidance.
- Difficulty in upholding previous traditions relating to family life, regarding marriage, birth and child-rearing practices.
- Loss of financial ability to provide for the family's needs, including education of children, medical care and a healthy diet.
- Unaccustomed dependency on outside assistance.
- Inability to participate in remunerative work because of host government restrictions on employment.
- Lack of work.
- Idleness in the home.
- Encountering new diseases, new systems of health care, and the imposition of new foods.

Associated with all these are very real feelings of hopelessness, loss of purpose in life and motivation, hatred, revenge, anger and other negative feelings that tend to pervade family life with violence. The roots of security, trust and confidence in others are also eroded in the process of becoming refugees, and this affects many people's mental health.

The International Year of the Family offers UNHCR an opportunity to revitalize its concern for the human dimension of refugee life, over and above the physical aspect of merely providing food, water and shelter. Moreover health needs to be viewed in the truest sense of the term, and from a range of physical, social and emotional aspects as well as aspirations for the future.

In this context, UNHCR has tried to address the planning for the IYF through its branch offices by sensitizing its staff to the special needs of refugee families. Its programmes consist of a variety of activities which (i) aim to involve refugees themselves in reordering their lives in a manner that can uphold individual family structures; (ii) enable them to meet together as communities to resolve problems in ways that are culturally compatible; and (iii) provide opportunities for the local populace to meet with refugees in situations where the latter can present themselves in a positive manner.

Children's drawings

Drawing and essay competitions have been devised for children on the theme "My family", with the intention of understanding the concept of family that refugee children have. What do they perceive as their family and what are they trying to tell us through their drawings? It has proved most revealing; the children have told stories through their art work about the plight of families during flight, and their life in the camps, or while awaiting repatriation after a period in exile. Grandparents have figured in

Even as refugees, men, women and children can all rediscover their potential through well-organized activities.

Distribution of food in a camp in Kenya for Somali and Ethiopian refugees

Girls attending school in a refugee village in Pakistan

these drawings as well as families with only one parent. Another aspect that has been highlighted is the need to find work for idle fathers who do nothing all day while the mothers work to keep the family alive. The trauma of violence figures largely in those pictures drawn by children from war-torn countries.

Children living under these circumstances often do not have role models they can emulate; their parents are under great stress and cannot give them the time they need. Violence pervades family life. It is very hard for a child to accept the humiliation that a parent must undergo in order to feed the family. Children sometimes have to take part in scavenging for food and other necessities such as water and firewood to keep the family alive. Activities for children need to be targeted at enabling them to express themselves through drawings or play activities focused on helping them to develop healthy attitudes to life and each other.

Their drawings tell the story of trauma and pain as well as the daily difficulties to be faced, and assist the helpers in understanding the problem better.

Women's group activities support women in coping with circumstances of great stress. Health education and well-baby clinics as well as baby festivals help to give mothers access to medical attention, early detection of disabilities, and preventive measures on behalf of their children. Demonstrations of low-cost, balanced nutrition are among various other ingenious means of coping with life under great deprivation and hardship.

Activities for men seek to help them too to adapt to a change of role that they perceive as depriving them of their position as breadwinner, head of household and decision-maker because of their lack of earning capacity.

Group support

Language classes have proved to be a very good medium for helping friendless and isolated persons to find group support. Family fairs or festivals where refugees and local people meet to share common goals and ideas serve to support such activities and relieve the great loneliness that many refugees experience.

Through paintings and posters, refugees exorcise the violence of their recent past and come to terms with the problems of the present. Health messages are also reflected in these expressions of art; AIDS, family planning, and other family-related health issues have been very sensitively handled within the relevant cultural context.

UNHCR in its various offices worldwide strives to obtain the same privileges for refugees as for the citizens of countries where refugees are to be found. Many offices have started innovative programmes like those described above, taking an integrated approach to embrace all aspects of refugee life. Encouraging the refugees themselves to tell us their story and what they want in life can ensure that whatever is done is appropriate. ■

Mrs Marie Lobo is Senior Social Services Officer in the Programme Technical Support Section, Office of the UN High Commissioner for Refugees (UNHCR), 154 rue de Lausanne, 1202 Geneva, Switzerland.

Diarrhoea – scourge of children

Gottfried Hirnschall & Patricia Hudelson

WHO's efforts to cont. diarrhoeal diseases put special emphasis on conveying three key messages: increase fluids, keep feeding (including breast-feeding), and consult a health worker if there are danger signs.

Breast-feeding should not be discontinued when the child has diarrhoea

Every year in the developing world, about 3.2 million children under five years die from conditions related to diarrhoea. Most of these deaths are due to dehydration and malnutrition, and therefore millions of young lives could be saved if only mothers knew how to give their children appropriate home care. The three basic rules of home care for diarrhoea are: 1) to give the child more fluids than usual to prevent dehydration, 2) to give the child plenty of food to prevent undernutrition, and 3) to take the child to a health worker if there is no improvement in three days or if danger signs appear.

Fluids appropriate for children with diarrhoea include rice water, soups, unsweetened fruit juices, oral rehydration salts (ORS), and even plain water. A child's normal diet can also usually be given. In particular, breast-feeding should be continued and weaning foods should not be diluted. Foods should be given in small amounts, but more frequently than usual, about six times a day.

Most children with diarrhoea will get better in a few days, without the need for costly and unnecessary drugs or a visit to a health worker. However, some children may become dehydrated and need to see a health worker right away. Therefore, mothers (or whoever is responsible for the child) must learn not only to give children plenty to drink and eat when they have diarrhoea, but also to recognize the danger signs that indicate that the child needs to be seen by a trained health worker. These danger signs are: many watery stools, repeated vomiting, marked thirst, eating or drinking poorly, fever, and blood in the stools.

Unfortunately, surveys of home care practices for diarrhoea conducted by Ministries of Health in collaboration with WHO show that few mothers are following the three basic rules. For example, a household survey in 1991 in Pakistan found that only about one in three mothers (29%) said they offered more fluids than usual to their children during a diarrhoeal episode, and only 40% said they continued feeding the child, while 70% reported using drugs to treat their child. In many countries, mothers use oral rehydration salts but do not prepare them correctly and do not give them in sufficient quantities.

Mothers need good advice

A major challenge facing most national programmes for control of diarrhoeal diseases (CDD) is to increase the number of children who receive appropriate home care when they have diarrhoea. This will require a thorough understanding of the reasons for mothers' current practices, and all the potential obstacles to good home care need to be identified and eliminated.

The CDD programme at WHO has developed a simple research protocol that can be used by national CDD programmes to collect information about local beliefs and practices with respect to diarrhoea. This community-based, ethnographic study can be carried out in about six weeks, and provides the kind of information that national CDD programmes need in order to develop specific, relevant home care recommendations for their populations. The results allow

Mothers can nearly always help their children to get over an attack of diarrhoea: it's just a question of knowing how.

programme managers to identify locally-available home fluids that mothers are willing and able to give in increased quantities to children with diarrhoea. The managers can then design effective ways to encourage continued feeding during attacks of diarrhoea, and select appropriate local names for the danger signs that should alert mothers to the need to take their child to a health worker.

Once national CDD programmes have developed appropriate home care recommendations, they must develop and introduce strategies to communicate this information effectively to mothers of young children. One way to do this is at health facilities where mothers bring their children for care. For mothers who have access to and use public health services, health workers can be an important source of information; every contact between a health worker and a mother represents an opportunity for education. Unfortunately, many of these opportunities are not used as well as they could be.

A routine evaluation assessing the practices of health workers treating children with diarrhoea in Jordan, for example, showed that only 14% of the children's mothers were given advice on all three key messages: increase fluids, keep feeding, and return to the clinic if danger signs appear. Increasing the quality of communication between health workers and mothers can ensure that existing opportunities for improving home care management are fully utilized.

Improving communication skills

To assist national CDD programmes in their efforts to improve health workers' communication skills, the CDD programme at WHO has developed a training course called "Advising mothers". Through both classroom instruction and supervised practice in health centres, instructors teach health workers to ***ask*** mothers about how they care for their sick children, ***praise*** them for appropriate home care practices, ***encourage*** them to continue these helpful practices, and ***advise*** them about other home care practices they should follow. Finally, health workers learn to ***check*** mothers' understanding of the advice they have been given. Results of the ethnographic study help health workers to use words and concepts that are familiar to mothers, and to make recommendations about fluids and feeding that are both practical and understandable.

The mass media can complement health facility-based efforts to educate mothers about the home care of diarrhoea. WHO is at present developing a guide to assist national programmes in using radio effectively for this purpose.

In summary, through a better understanding of community beliefs and practices, as well as improved health worker communication skills and effective radio programmes, we can provide families with the knowledge, skills and motivation they need to give appropriate home care to their children. ■

Dr Gottfried Hirschhall is a Medical Officer and Dr Patricia Hudelson is a short-term professional with the Diarrhoeal Disease Control Programme, World Health Organization, 1211 Geneva 27, Switzerland.

Teaching good home care in Mexico

In Tlaxcala, Mexico, researchers found that mothers already give appropriate fluids – such as camomile tea, or the water strained off after cooking rice, and vegetable and chicken soups – to their children when they have diarrhoea. But mothers do not give these fluids in increased amounts, and while they appear to recognize signs of dehydration such as a dry mouth, sunken eyes, sunken fontanelle and general listlessness, few mothers realize that these signs indicate that the child needs more fluids. One of the recommendations made by the Tlaxcala CDD programme, therefore, is that more emphasis should be placed on teaching mothers how to actively encourage children to drink more when they have diarrhoea. Health workers should also focus on teaching mothers to watch for signs of dehydration, and on explaining that in most cases these signs can be prevented by ensuring that the child drinks increased amounts of fluids.

The family of tomorrow: a message from a world-famous author

In order to be successful, the family ought to embrace several generations, since it is essential for the young and the less young to live together, understand one another and help one another. I have no doubt that the future will see the "extended" family being recreated, in the sense that it will not be based simply on the notion of blood relations but rather on ties of affection.

The future seems likely to see a crucial change in the role of the family, which will become the initial training centre where people are apprenticed for life in society.

Even more vital will be the revival of what used to be called the "extended" family, which knits together basic family units. This "joint family" comprising relatives in the broadest sense was what constituted Chinese and Indian society in the past. I myself had the good fortune to live in one of those "large" families – good groundwork for being able to adapt very easily to the most varied settings and personalities. Better still, I come from a complex family, mixed Chinese and European, so that I was never trapped within one single culture or forced along one single path; consequently I can take the broad view that the whole world seems like one vast family... Distrust and fear have no part in it, and there is no need for protection. This large family is not a fortress but rather an access route to everyone and thus the true cradle of society.

I have no doubt that the future will see this large "extended" family being recreated, in the sense that it will not be based simply on the notion of blood relations but rather on ties of affection. When the young people of North America tried in the 1960s to form such communities, they failed because all who were not of the same generation were excluded... Yet children yearn to belong to a great family; one has only to see the gangs of youngsters in the streets of our big cities to measure this need.

In order to be successful, this "family space" ought to embrace several generations, since it is essential for the young and the less young to live together, understand one another and help one another. Within a family at its basic level, the child can be lonely. In the bosom of the extended family it will never be lonely, because if the mother is absent there will always be the grandmother, the sister, the cousin or the aunt. Thus the child is not fixated exclusively on its mother since the very notion of motherhood is itself extended. The future will undoubtedly rediscover this family–community structure, particularly since technological advances make it possible for a lot of work to be done at home, thus avoiding useless and exhausting travelling.

Let me say again – because it is crucial – that the extended family can resolve at a stroke all the problems of unequal talents and unequal success which otherwise arouse that devastating emotion – human egoism. The function of the family is to level out inequality. ■

Extracted, with the permission of Mrs Han Suyin, from Les yeux de demain [The eyes of tomorrow], published by Christian de Bartillat, Paris, 1992.

Families . . .

[illegible]

Tanzania

Nepal

Jamaica

Mali's new private sector

Hubert Balique, Yannick Lejean, & Isabelle Annaheim

A doctor writes a prescription for his patient

Mali's decision to renounce the state monopoly within the national health service and to authorize private medicine paved the way for a new kind of private sector to develop, with highly successful health centres run by the local community on a non-profit-making basis.

Since 1989, Mali has seen a new type of health institution emerge in the form of Community Health Centres, founded on three fundamental principles so that each Centre is:

- created by the community;
- run by the community;
- managed by the community.

The results recorded to date are all the more convincing because they stem from a purely Malian initiative. Ever since its independence in 1960, Mali has firmly opted for a health policy aimed at ensuring the best possible state of health for all its people, so it lost no time in setting up basic health services. Thus the country already had a relatively well-developed health network when, in 1979, the government made the promotion of primary health care its fundamental choice for reaching the goals of Health for All.

In 1985, a major shake-up in the economy led the government to renounce the state monopoly within the national health service and to authorize private practice by the medical and pharmaceutical professions. The economic measures were undoubtedly justified, for the country's economy had been floundering under a state-controlled sector that was both inefficient and extravagant. On the other hand, there was much concern about the consequences of the changes in the health system for the 90% of the population who had very little spending power, and who could hardly pay the charges of a private sector whose primary objective was to make a profit. Many people feared that the public sector might become the sector of the poor, and would lose what little quality it still had.

A local initiative

Paradoxically, one consequence of the

Lining up for health care in 1986. Health care today has become much more accessible for all.

new move was to allow individuals the scope to show some initiative. The first innovative move has been attributed to a group of leading citizens from Bankoni, one of the most populous districts of the capital, Bamako, where more than 60 000 people live in very modest circumstances. In an attempt to respond tangibly and effectively to the community's health problems, they decided to start a private but non-profit-making health centre, strictly in line with the technical standards recommended by WHO and entirely run by representatives from the community.

Their primary idea was to break the vicious cycle of disease and death, and to show the people that with the right kind of disciplined approach it is possible to resolve problems considered as insoluble. They laid down three objectives for the centre:

- to ensure financial accessibility to basic health services for a very large majority of the residents;
- to offer good quality health care, whether in human and interpersonal terms or as regards medical techniques;
- to guarantee the institution's long-term technical and financial viability.

The Centre opened its doors in March 1989 and has been expanding ever since. Thanks to the efforts of three doctors, two midwives and four nurses, in 1992 alone it recorded 22 515 general medical consultations and 2639 deliveries. Its takings have risen to 31.8 million francs CFA, (US$ 109 000) enabling it to pay out 14.3 million francs CFA (US$ 49 000) in salary costs.

Other outlying districts of Bamako were encouraged to follow Bankoni's example, and today 15 such centres are in operation. Two regional capitals – Ségou and Mopti – have also followed suit, while six rural communities have opened their own community health centres, each headed by a physician known in Mali as a "rural doctor."

The 15 urban centres in Bamako now cover a total population of some 250 000, or around 30% of the city's population. They handle a total of more than 80 000 consultations a year, all undertaken by medical practitioners; this amounts to 20% of all general medical consultations officially carried out in Bamako. The 9300 deliveries at the centres, following regular prenatal consultations and under the care of state-registered midwives, represent nearly 30% of all births recorded in the city, and there are now more than 2000 new family planning consultations each year.

The services offered by the centres are available on a 24-hour basis, and include everything appropriate to a first-level health training:

- in the field of medical care – general medical consultations, minor surgery, nursing care and first-level laboratory tests;
- in the field of maternal and child care – family planning consultations, prenatal and postnatal consultations, deliveries, visits with healthy children, and immunizations.

Support from development partners

These new ventures are already playing a growing role in Mali's national health system, since several projects financed by the country's development partners have put emphasis on supporting communities that want to start their own health centres. One such example is a rural health and water supply project, which envisages the creation of 120 community health centres. All the indications are that this approach is the one best suited to the Sahel area of Africa, where drought is a permanent

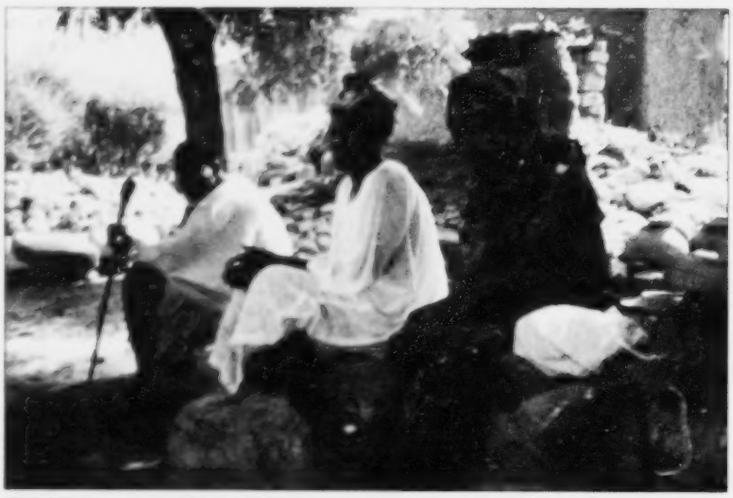
Even those with little spending power have a good chance of being within reach of good quality – and affordable – care.

constraint and where a health system is needed that can accept subsidies yet not lose its local dynamism and relevance.

The state, which originated this new dynamic movement by permitting individuals and communities to take charge of their own destinies, has been careful to encourage and go along with it while respecting its special nature. It began as a completely autonomous movement, started by individuals quite independent of the public authorities. So the state had to avoid stifling it by the kind of bureaucratic attitude that all too often leads well-intentioned but clumsy officials to destroy initiatives while claiming that they only want to regularize them. Moreover, health developments in the past have suffered too much from utopian visions which have never come to pass, however well-intentioned the original aspirations.

The technicians of the state therefore offered their advice to the people in charge of the centres as often as they required it, and brought them into a good number of health activities in the appropriate fields. As for the Ministry of Health, it has stated with increasing clarity that the national health system is a combination of a public sector, a profit-making private sector – which it calls the private sector, and a non-profit-making private sector – which it calls the community sector. ■

Dr Hubert Barque is Technical Counsellor to the Ministry of Health, Solidarity and the Elderly, B.P. 113, Bamako, Mali, and Dr Yannick Isnard and Dr Isabelle Amsheim are physicians practising in that country.



Taking health care to where people live

Children drawing drinking water from a traditional well

Drug use and the family

Lee-Nah Hsu

Family relationships can contribute to drug-use-related problems – yet can have a powerful influence in preventing or modifying these problems. The challenge is to help the family to detect, prevent and if necessary treat abusers, with positive support within the family and the community.

Drugs are part of human society. The ancient societies enriched their cultural ceremonies through drugs which they believed could link them to the gods or to interior forces. People celebrated happiness and sadness with drugs, or used them in rituals to highlight the miracles of birth, life and death. Since drugs include alcohol, tobacco and licit and illicit psychoactive substances, none of us escapes drug use in our lifetime. Yet the magical, life-enhancing substances can also be the agents of destruction of life. The challenge is to find a balance in realizing the beneficial gifts of drugs while minimizing their destructive forces.

The family is the first environment where an individual encounters drug use. Parents who smoke, drink alcohol, or use other drugs, will affect the formation and development of their children, even before they are conceived or born. Studies have found that the father's exposure to harmful substances at work, smoking cigarettes, drinking alcohol and using other drugs may contribute to low birth weight and other malformations in the baby. Young women, especially of low socioeconomic status, who abuse drugs and alcohol tend to be malnourished and lack access to prenatal health care – factors which can contribute to later fetal malformations during pregnancy. Families can also be gravely damaged or destroyed by excessive use of psychoactive substances by family members. The damage can result from the immediate effects of drug use, such as violence associated with intoxication, or from long-term effects, such as economic problems, discord and breakdown in communication resulting from drug dependence and impaired health.

Influence of the family

A women's project run by WHO's Programme on Substance Abuse has found that, in most countries, families and close relationships on the one hand contribute to drug-use-related

It is within the family that a lifetime's habits and behaviours are formed.

People everywhere need to be informed of the dangers of drugs.

problems, and on the other hand also have a powerful influence in preventing or modifying drug abuse. Studies have shown that more than 60% of people with alcohol abuse problems, especially among women, have family members who had difficulties with the appropriate use of alcohol. In addition, most drug users tend to mix alcohol and other drugs, and seldom use only one substance. Child neglect is a particularly common problem among drug-abusing families.

Although in many cases, family members deny the existence of drug-use problems and make heroic efforts to carry on life as usual, the family is also the arena for learning healthy behaviour, including ways of preventing or dealing with drug-use problems. A family's ability to promote healthy behaviour can be enhanced by providing relevant information, encouraging early detection and offering prompt assistance through primary health care when drug abuse does become a problem.

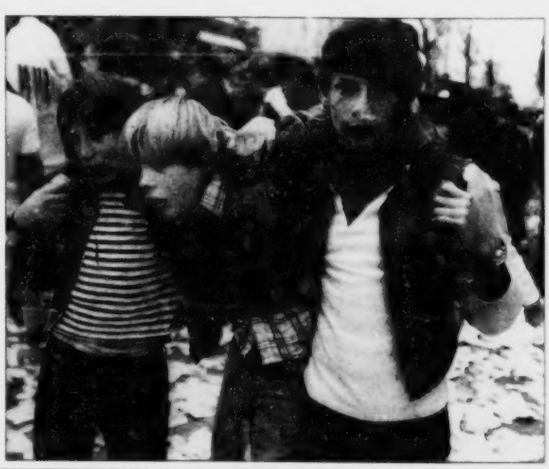
However, it takes the collective effort of the individuals comprising a family to deal effectively with issues that affect the integrity of that unit. The increasing breakdown of families (particularly in single-parent households) means that this vital support system is often lacking. But a healthy family can help an individual to cope by creating the right environment where he or she can acquire the ability to handle life crises. Prevention should therefore be geared towards supporting the family as a unit rather than focusing on the substance abuser as an isolated individual – which is the dominant approach today.

The influence that parents have on their children's development cannot be overestimated.

Vulnerable ages

Children who run away from physical and psychological violence by drug-abusing parents may escape to the streets only to face another violent world. Some begin to sell their own bodies for survival and again get involved with drugs. Street children typify the plight of such youngsters. By contrast, some children who stay at home with drug-abusing families are likely to be forced into early adulthood against their will. They may have to take over the role of caring for and protecting younger siblings, or they may suffer the burden of supporting the drug-use habits of their parents by working on the streets or being sold to labour or prostitution. Children from such families are being deprived of their basic human rights for education and health care as well as freedom from hunger, fear and the danger of violence. Many such children may seek early marriage, hoping that this will provide another home to substitute for their own. Unfortunately, early pregnancy and childbearing for such new families often destabilize them before they take root, and many end up in divorce or separation.

Adolescence itself is a vulnerable stage of life where peer pressures may override better judgement or family upbringing. Many *adolescents* who come from families without drug-use problems begin their first experiment with drugs through the examples of their friends. A gateway drug in some countries can be as simple and common as ordinary glue, which is harmful and can give a "high" when sniffed. In other countries, smoking



Young people are most often introduced to smoking or drug abuse by friends of their own age.

may be referred to as a gateway to other drugs. They hide the drug-use behaviour from their own families, who may not realize there is a problem until it is either too late or a crisis occurs.

Aside from peer pressure, many *adults* who face a crisis in life, difficulties with their job, or disappointments in interpersonal relationships resort to drug use. In this highly competitive and rapidly changing political and socioeconomic climate, drug use has become the refuge for many and perhaps even a solution for some. Never before have we witnessed the disintegration or questioning of political establishments and the sweeping winds of change in every walk of life. Economic crises and unemployment encourage traditional attitudes and norms to crumble, and human beings are thrown into a world of uncertainty and risks which contribute to increased substance use.

Even growing old may be accompanied by increasing drug use, whether appropriate or not. Families sometimes ask the doctor to put their *older folk* on tranquillizers to lessen their state of confusion, while some old persons may become confused due to multiple drug interactions – a trend which has left many cases of Alzheimer's disease undetected. The loss of families, friends and gainful employment during old age compounds the problematic use of drugs.

Community support

Prevention of drug-abuse problems for families requires the initiatives of community networks (women's organizations such as mothers against drunk driving or self-help groups such as Alcoholics Anonymous) and of concerned nongovernmental organizations. In this context, the primary health care system needs to link strongly with families, schools and the workplace, while public education and the mass media can play a part in targeting different age groups. Communities must provide greater alternative economic and social support to needy families than has hitherto been the case.

Finally, drug use and drug abuse ought to be de-stigmatized within a society and within a culture, so that the family can talk about these problems openly. This can prevent the secrecy surrounding drug use, improve understanding of the harmful effects that drugs can have on individuals and their families, and make it easier to detect problem users within a family at an early stage. Individuals can then be encouraged to seek treatment with family support. ■

Dr Ieet-Nah Hsu is a Scientist with the Programme on Substance Abuse, World Health Organization, 1211 Geneva 27, Switzerland.

Drug problem? Talk about it. Families that are supportive can help their youngsters to get out of the drug-abuse trap.

Mental health matters too!

Anula D. Nikapota

A child who is healthy is physically well and also happy, growing and developing well according to his or her age. The child mental health programme in Sri Lanka encourages health workers to watch for families and children under stress.

A happy child is more likely to show normal growth and development

Programmes for child and family health have for several years included specific tasks and training related to child development and mental health. Identifying the problems in this field led to the realization that promoting child development needs not one but many different inputs and the use of several different strategies.

The child mental health programme in Sri Lanka is implemented by the Family Health Bureau in the Ministry of Health, with the support of UNICEF. Coordination with other relevant agencies, particularly the training institutions for primary health care, has helped to nurture and extend these new inputs.

One early innovation was to introduce the concept of the integrated nature of health, growth and development. In other words, a child who is healthy is physically well and also happy, growing and developing well according to his or her age. One strategy selected was to include in the growth chart of each child a few selected developmental milestones such as walking, talking and understanding simple requests. This served to create awareness of this concept among parents, families, communities and health workers.

Health workers were taught about children's developmental needs and about ways of discussing with parents how to promote development by fulfilling those needs. For example, one young mother who was very poor and had two young children was upset because she could not provide the kind of toys that would help her child to learn; she had read that this was important. Health workers routinely visit homes with young children, and her own health worker had established a good relationship with her and presently learnt about her worries. The health worker was then able to build up the mother's confidence in her own ability to help her children's development through play and learning during day-to-day activities, using ordinary objects for play.

Another aspect of the programme of particular value in certain areas

involves identifying children who are slow developers, are under acute stress or have behavioural problems. Some of these inputs are similar to those in other parts of the world.

Risk factors at home

A unique feature of the programme is the introduction of the concept of routinely monitoring the home environment for risk factors. Such risk factors were identified during research which in fact used the health workers as research assistants. This part of the programme is still regarded as more of a project, although it has been accepted for use nationally.

The purpose of this monitoring is not merely to identify family problems. The real reason for this approach is that there are always families where educating them or "telling them what to do" is not sufficient because – for a variety of reasons – they find child care stressful or more than they can easily cope with. This is a common experience in health-related field work in many cultural settings.

Working with such families – that is, helping families to improve their mental health and functioning so as to cope and care better for their child – is very much part of clinical practice for child and family mental health. So it seemed entirely appropriate to introduce a similar concept into the primary health care programme for child and family health.

The risk factors include those that are likely to be associated with child care problems such as a very young mother, poor spacing (more than two children under 3 years old), lack of interest in the child, or a mother who finds understanding health messages difficult. In addition, there may be evidence of poor coping from whatever reason, such as poor organization in the home, or of specific problems such as severe marital discord, mental illness in parents, alcoholism and drug abuse, abject poverty, or trauma due to the conflict situation in the country. Sadly, the last factor is all too predominant in some communities at present.

Health promotive behaviour

Training materials have been developed which emphasize the basic principle of working with these families, which is for the health worker to approach the issue of meeting children's needs by looking at the families' problems, as well as their resources, and working with them to achieve, step by step, health promotive behaviours in their daily life.

A mother was unhappy and resentful that her husband was drinking heavily. The couple quarrelled every day and the children became increasingly worried by this. The mother told the health worker, who had known the family since the youngest child was born and who was aware that the family had durable strengths: the husband did care for the family, and the couple did care for each other.

She explained to the wife how she could use those strengths by perhaps being less irritable with her husband even when she might feel he had let her down. The health worker also got on well with the husband and so was able to talk to him about his hopes for the children – at the same time using this opportunity to point out that his drinking was upsetting the children. Gradually the situation did improve, and the health worker went out of her way to praise all the family for their efforts.

Any programme has to be evaluated to judge whether its efforts are really leading to improvement. In the case of this programme in Sri Lanka, such tasks as are described here are still not as familiar – and hence are not performed as extensively in the field – as are tasks related to immunization or nutrition, for example. Those concerned with the programme, however, feel that these inputs, and particularly work with families and children under stress or having problems in coping, will significantly enhance child and family health. ■

Dr Anula D. Nikapota is a consultant in Child and Adolescent Psychiatry at the Brixton Child Guidance Clinic, 19 Brixton Water Lane, London SW2 1NU, England. She has also worked as a UNICEF consultant with the child mental health programme in Sri Lanka.

Playing is learning. The toys don't have to be expensive.

Bathtime: a happy occasion for mother and child.

Preventing a genetic disease

Antonio Cao

Thalassaemia major is a common inherited disorder in many countries. A programme based on carrier screening, genetic counselling and prenatal diagnosis has proved highly successful in the Italian island of Sardinia, and could be a model for preventing other comparable genetic disorders.

Thalassaemia major is a common inherited disorder characterized by severe anaemia. A limited number of patients may be cured by bone marrow transplantation from identical siblings, but for the large majority there is no cure. The usual treatment consists of regular blood transfusions and nightly subcutaneous infusions of an iron-combining agent (desferrioxamine B). Life expectancy with this regimen has not yet been established, but most likely extends beyond the third decade.

Thalassaemia major is an inherited condition. Patients affected have both copies of the β-globin gene defective; both parents have a single copy of a defective β-globin gene and are clinically normal, but show particular haematological characteristics which can be detected by simple methods of analysis. Risk of two β-thalassaemia carriers producing an affected child is 1:4 in each pregnancy.

The disease occurs with a high frequency in a belt extending through the Mediterranean coasts and islands, the Middle East and Indian subcontinent to the Far East. Worldwide there are at least 70 million carriers, and at least 42 000 patients with thalassaemia major are born each year. The health burden created by this disorder is enormous, and will obviously steadily increase because of the rise in life expectancy following the introduction of modern supportive measures. The impact of this disease is bound to be more dramatic in developing countries.

In Sardinia, the Italian island in the Mediterranean with 1.5 million inhabitants, the disorder has a carrier frequency of 12.6%. This means that one couple out of every 60 is at risk of having a child with thalassaemia major, and the incidence of this disease among newborn babies is 1:250 live births. The high frequency of β-thalassaemia, the severity of the disease, the big health problems created in such a small population, and the development of ways of detecting the disease early in gestation led us in 1977 to organize a preventive genetic programme based on educating the populations, carrier screening and counselling, and antenatal diagnosis, all with the aim of controlling the disease.

Education and information

Voluntary screening was offered to young unmarried adults, prospective parents and primarily to couples where the woman was pregnant. The methods for sensitizing and involving the population included: consultations with parents' associations, community leaders, physicians (mainly obstetricians and paediatricians), family planning associations, nurses and social workers; introducing education on inherited anaemia in primary and secondary schools by the use of booklets and cartoons; informing the general public through the mass media; and providing information leaflets and posters in marriage registries, general practitioners' offices and family planning clinics.

Informal consent by the person being screened was not requested, but before testing we tried to inform each person about the nature of the illness, the implications of being a carrier and the alternatives available to individuals found to be carriers. Counselling was carried out according to internationally accepted guidelines; it has been non-coercive and was generally based on a private interview with the individual carrier or couple. We carefully avoided any mandatory measure restricting the individual's freedom. The information provided served as an informal basis upon which to make decisions on birth

The distribution of β-thalassaemia.

control, mate selection, adoption, fetal testing and artificial insemination by donors. An explanatory booklet illustrated with pictures was made available.

Particular emphasis has always been given to details of fetal testing, including sampling procedure, risk to the fetus, failure to obtain appropriate material for analysis and possible misdiagnosis. Once identified, each carrier was informed about the implications of his/her carrier status for close relatives and received simple, clearly written educational material. Relatives were also informed in this way, and had an opportunity to be referred to our centres for further information or in order to be screened. This strategy helped to multiply the efficacy of the screening.

Prenatal diagnosis was carried out from 1977 to 1982 by fetal blood analysis, and later, when the molecular defects leading to β-thalassaemia were identified, by DNA-analysis of part of the embryonic membrane, obtained at 10–12 weeks of pregnancy.

Accurate prenatal diagnosis

Most women learnt about thalassaemia from the mass media, general practitioners or obstetricians, indicating that these information channels are the most efficient available. A large majority of the couples counselled accepted prenatal diagnosis as a means of avoiding the birth of a child with thalassaemia major. The result of prenatal diagnosis was very accurate; only three misdiagnoses occurred out of 3758 so far carried out. Diagnosis of an affected fetus led all couples but four to interrupt the pregnancy.

Non-acceptance of prenatal diagnosis and a decision not to interrupt a pregnancy with an affected fetus was related to strict adherence to the Catholic religion. We evaluated the programme's effectiveness by monitoring the birth rate of thalassaemia major, which stood at 1:250 live births before prevention was available and then fell to 1:1300. The main reasons accounting for continuing births of thalassaemia major cases are lack of information on the disease and on ways of controlling it, either on the part of the parents or of obstetricians, refusal of antenatal diagnosis and misdiagnosis. In our programme, no adverse effects such as stigmatization or abnormal psychological reactions of carriers have been observed, while couples at risk have resumed reproductive behaviour which had been constrained before antenatal testing was available.

The results indicate that programmes based on carrier screening, genetic counselling and prenatal diagnosis are very effective for preventing an autosomal recessive disease such as β-thalassaemia.

Very similar results have been obtained in other Catholic as well as Orthodox Christian and Muslim populations, composed of Greek Cypriots, Turkish Cypriots, Greeks and continental Italians. The major challenge in the future will be to organize such programmes in the Middle East, the Indian subcontinent and the Far East, where at present the resources, level of education and state of development seem to preclude any effort in this direction. Finally, the control of β-thalassaemia by carrier screening and prenatal diagnosis may serve as a model for the organization and delivery of prevention programmes for other comparable disorders, particularly cystic fibrosis. ■

Professor Antonio Cao is Director of the Istituto di Clinica e Biologia dell'Età Evolutiva, Università Studi Cagliari – and Director of the WHO Collaborating Centre for Community Control of Haemoglobinopathies, via Jenner s/n, 09121 Cagliari, Italy.

WHO in action

Calling for a nursing revolution in eastern Europe

As the largest group of health personnel in any country, nurses play a key role in maintaining and improving the health of people. In the countries of central and eastern Europe and the newly independent states of the former USSR, there are 2.6 million nursing staff, whose contribution, according to nursing leaders attending the recent meeting of the WHO European Regional Committee in Athens last September, was needed today more than ever, "when the health of our people is under threat because of the serious economic difficulties being faced."

The Nursing Declaration of Alma-Ata had been adopted a week earlier in the capital of Kazakhstan, and government Chief Nurses from six new WHO Member States – Armenia, Kazakhstan, Kyrgyzstan, the Russian Federation (Tumen Oblast), Turkmenistan and Uzbekistan – declared that the development of nursing, midwifery and other middle-level health personnel should be a priority for all countries.

Various measures were outlined, which must be carried out if nurses are to function effectively. As a starting point, every Ministry of Health was urged to establish a Chief Nurse position, to be occupied by a qualified nurse and supported with appropriate staff and budget. Each country should also develop a national action plan for nursing, as recommended in 1992 by the World Health Assembly. Finally no progress was possible without improvements in the socioeconomic position of nurses, including better pay and working conditions.

Nursing leaders also called for closer international links, within the newly independent states of the former USSR, and with WHO. The WHO Collaborating Centre for Primary Health Care and Nursing in Alma-Ata, Kazakhstan, would continue to play a leading role in maintaining these networks.

"This is an extremely important milestone which could revolutionize health care in the former USSR," said Jane Salvage, WHO's European Regional Adviser for Nursing and Midwifery. "Nurses in the newly independent states face enormous difficulties in their professional and personal lives. Nevertheless they are determined to introduce long overdue changes in the role and functions of nurses, midwives and *feldshers* (health workers). WHO is proud to be working in partnership with these dynamic leaders at such a critical moment in their countries' health development."

The government Chief Nurses will meet again in Kyrgyzstan in 1994 to review progress towards meeting the aims of the Declaration.

For more information, please contact the Nursing and Midwifery Unit, WHO, 8 Scherfigsvej, 2100 Copenhagen Ø, Denmark. ■

A nurse gives an injection in Tbilisi, Georgia

International Thyroid Project

An unprecedented increase in childhood thyroid cancer has been recorded in Belarus since the Chernobyl nuclear power plant accident in April 1986. The Belarusian delegation told WHO's European Regional Committee, which met in Athens in September, that in 1991 there were more than 100 cases in children under the age of 15 in the Gomel region – the part of Belarus closest to Chernobyl – and the incidence was increasing in the Brest region.

In response to this situation, the WHO Regional Office is launching an International Thyroid Project, aimed at elucidating the origin of the outbreak and its likely extent, both geographically and over time. Its findings will have implications for advice on public health measures that should be undertaken following any similar accidents in future.

The issue is of particular importance in the European Region, which has the largest concentrations in the world of nuclear activities and facilities – including nuclear weapons, manufacturing and testing sites, nuclear waste disposal and power generation, as well as food irradiation and processing. All these create uncertainty about possible public health implications of exposure.

The International Thyroid Project will involve creating a network of international collaborating centres with specific expertise around a collaborating centre in Minsk, from which diagnosis and treatment will be coordinated for the whole country. The network is designed to provide a framework in which collaborative research studies and training can be carried out.

For more information, please contact Dr Keith Baverstock, WHO European Centre for Environment and Health, Via Vincenzo Bona 67, 00156 Rome, Italy (fax: (396) 411 66 49). ■

The classification of diseases is a powerful tool for epidemiological research and, ultimately, for health promotion.

One hundred years of international disease classification

On 1 January 1993, the Tenth Revision of the International Classification of Diseases (ICD) came into effect, exactly one century after the adoption of the first classification. Two volumes were published in the course of 1993, and will be followed by a third.

The need for classifying diseases and causes of death was clearly perceived centuries ago. The first root of the classification can be found in 18th century work by François Bossier de Lacroix, William Cullen, and the father of biological classification systems, Linnaeus. In fact, the statistical study of disease began a century earlier, with John Graunt's analyses of the London Bills of Mortality. During the 19th century, people like William Farr of London, Marc D'Espine of Geneva, and Jacques Bertillon of Paris worked at classifying causes of death in an international perspective.

The first edition of the international list of causes of death, presented by Jacques Bertillon at a meeting of the International Statistical Institute in Chicago, was adopted 100 years ago, in 1893. This list was subsequently revised several times, reflecting advances in medical knowledge and changes of emphasis in public health. At the time of the Sixth Revision, in 1948, WHO became responsible for the revisions. The classification was considerably expanded over the years to cover the whole spectrum of health data, as it was recognized that classifying sickness and injury was closely linked with the classification of the causes of death.

Useful in many fields of medicine, such as hospital and outpatient care, epidemiological research, hospital indexing of medical records, medical audit systems, planning and evaluation of health services, social security, health insurance, health cost and reimbursement for care services, the core classification is intended to be appropriate to all countries, regardless of their state of development. Its structure makes it possible to expand or reduce the number of categories according to need. The ICD is a tool for making comparisons between countries at the same point in time, and within and between countries over time, thus making comparable statistics available for decision-making in disease prevention and the provision of care at all levels.

In order to emphasize its statistical purpose and to reflect the widening of its scope, ICD has now received the title of "International Statistical Classification of Diseases and Related Health Problems". Specialty adaptations have been produced to include such areas as oncology, neurology, psychiatry, rheumatology and orthopaedics. Another important health-related classification concerns impairments, disabilities and handicaps, which establishes for international acceptance and use uniform definitions in the terminology – often confused and misused – in the field of rehabilitation. ■

WHO on ....

Safety for mothers and babies

For many women throughout the world, pregnancy and delivery may become a life-threatening condition that can also threaten the newborn baby. The risk of dying while pregnant can be effectively reduced only by providing continuing health care from community to first-referral level. According to the World Bank, it would cost only US$ 2 per head to bring about a substantial cut in maternal deaths and illness, while "an effective continuum of care" is essential to safe motherhood.

In a report called "Making Motherhood Safe", the World Bank emphasizes the need to tailor safe motherhood strategies to local and national settings, and suggests a range of safe motherhood interventions to cover wildly different situations. WHO and the World Bank agree that prenatal and delivery care are the most cost-effective interventions through which governments can improve adult and child health.

Under its Safe Motherhood Programme, WHO is sponsoring many national activities and has worked out the following basic principles to protect mothers and children worldwide.

Before and during pregnancy

- Women should have full access to health care and be adequately nourished *before* becoming pregnant; they should not become pregnant if this is not wanted, or if she is too young.
- As soon as a woman is pregnant she should register with a health centre and seek appropriate care.
- Pregnancy care will allow complications to be recognized, detected at an early stage, and properly managed (see box).
- Pregnant women should ensure that they eat well and rest as much as possible.
- They should receive information about and services for family planning.
- They should be immunized against

Complications affecting mothers and babies

Complications	Effect on the mother's health	Effect on the baby's health
Severe anaemia	Increased risk of haemorrhage	Low birth weight, asphyxia, stillbirth
Haemorrhage	Cardiac failure, puerperal sepsis	Asphyxia, stillbirth
Hypertension in pregnancy	Eclampsia (convulsions, coma, then death)	Low birth weight, asphyxia, stillbirth
Unclean delivery	Infection, maternal tetanus	Neonatal tetanus, sepsis
Obstructed labour	Fistula, uterine rupture, amnionitis (inflammation of the placenta), sepsis	Asphyxia, sepsis, stillbirth, handicap
Unwanted pregnancy	Unsafe abortion with infection, haemorrhage, infertility	Increased risk of disease or death, child abuse, neglect, abandonment
Infection during pregnancy, sexually-transmitted diseases, malaria	Premature onset of labour, ectopic (extra-uterine) pregnancy, pelvic inflammatory disease, cerebral malaria, severe anaemia	Premature delivery, eye infection, blindness, pneumonia, stillbirth, non-congenital syphilis, low birth weight

tetanus to protect themselves and their baby.
- They should receive iron and folic acid supplements to prevent anaemia.

During delivery

- When giving birth, women should have access to emergency care at a health centre, and to referral facilities in case of serious complications.
- The delivery should be conducted under clean conditions, and should be safe and non-traumatic.

After delivery

- The cord should be cut cleanly, and immediate care of the mother and the baby is essential.
- If the breathing is not spontaneous and normal, the baby should be helped immediately, using resuscitation techniques, and should be kept warm and dry in suitable wrapping.
- The eyes should be washed out with saline and either silver chloride or antibiotics to avoid eye infection and even blindness that could occur if the mother suffers from a sexually-transmitted disease.
- The baby should be put to the breast immediately, and mother and baby should be kept together.
- The baby should be immunized against tuberculosis and poliomyelitis.

In all these interventions, the traditional birth attendants working in developing countries have a key role to play, particularly at the crucial moment of childbirth, so it is essential that they receive appropriate education. Their best tool for safe deliveries is an appropriate kit.

The birth attendant's basic "clean delivery kit"

The kit includes:
- soap for washing hands;
- 2 or 3 sterilized cord ties;
- a razor blade or other instrument to cut the umbilical cord cleanly;
- a clean piece of cloth or small gauze pads;
- a plastic envelope, box or cloth bag to keep the kit in.

In various settings, the kit may also include:
- a plastic sheet to be used as the delivery surface;
- a sharpened stick for cleaning dirt from beneath fingernails;
- a small bottle of antiseptic solution or powder to dry the cord quickly and prevent infection;
- pictogram instructions on how to use the kit.

Other useful items:
- clean towels for drying and wrapping the newborn infant;
- a colour-coded tape for measuring the chest circumference;
- a single-dose dispenser for eye care in areas with high levels of sexually-transmitted diseases.

Safe motherhood means care for the mother, but also for her newborn baby. Being pregnant and giving birth entail certain risks, but being born can also be a risky event. When a baby dies at childbirth or shortly afterwards in a developing country, there is almost always an avoidable cause related to inadequate care of the mother during pregnancy and delivery. Just as no woman should die because she becomes a mother, babies should survive to live useful and productive lives. This is possible if more care, help and forethought surround this happy event in a family's life. ■

This information is extracted from the July–October 1993 issue of **Safe Motherhood: a newsletter of worldwide activity** *published by WHO three times a year in English and French. For a free subscription, write to the Maternal Health and Safe Motherhood Programme, Division of Family Health, World Health Organization, 1211 Geneva 27, Switzerland.*

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In the next issue

"Oral health for a healthy life", will be the slogan and theme of the 1994 World Health Day – 7 April. The next issue of **World Health** will celebrate this event, and will describe how recent decades have seen great improvements in oral health throughout the world, as well as new tendencies in tackling problems that still exist. ■

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